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ABSTRACT

The Australian Council for Educational Research and the New Zealand Council for Educational Research together developed an information dissemination package entitled "SET: Research Information for Teachers." This package consists of articles written in journalistic style that convey information concerning recent research in education to practitioners who subscribe to the SET program. To determine user characteristics, case studies were made of 13 users representative of the range of the 2,950 subscribers to SET in 1980. Analysis of these studies showed that SET material adoption decisions were made by individuals. When school principals controlled the materials, dissemination was either limited to supervisory personnel or was of a passive nature. Active dissemination usually occurred when librarians or other long-term staff members who had awareness of staff needs and had the opportunity and commitment to spread new ideas served as SET material disseminators. (Author/PGD)

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FACTORS AFFECTING WITHIN SCHOOL USE OF EDUCATIONAL KNOWLEDGE [1]

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Introduction

Studies of the creation, diffusion, and utilisation of new knowledge have become so prolific that a new journal devoted solely to these topics can now be comfortably sustained.[1] This general increase in the amount of literature on change is reflected in the field of education (Tamir, et al, 1979), and it could be argued that the impetus for early studies in this field originated in the wake of the large scale curriculum projects which attempted to influence school practice in the 1950s and 1960s. One result of these studies has been an improved understanding of the characteristics of innovations and educational systems which are associated with effective curriculum change (see, for example, Fullan and Pomfret, 1977).

Subsequently, there have been efforts, particularly in the United States of America (USA), to set up mechanisms designed to improve the flow of new knowledge to schools (Raizen, 1979) and to assist schools to use innovations based on new knowledge (Emrick and Agarwala-Rogers, 1978). These initiatives have been designed to improve the quality of school or district level decision-making about curriculum.

We have witnessed a similar sequence of events in Australia. National curriculum projects have been completed in some subject areas and the effects of at least one of these have been analysed in terms of its adoption and implementation by schools in different state educational systems (Owen, 1979). Partly as a result of the findings of studies of large curriculum projects in the USA and elsewhere, agencies such as the Schools Commission have opted for school or local level support for innovation, (Foyster, 1979).

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One of the implications of school level decision-making is the need for relevant data to be made available to teachers. Most educational researchers would subscribe to a belief that findings derived from systematic investigation of educational issues should influence what takes place in schools, but there are some who challenge this view. For example, Caplan and Nelson (1973) query the assumption that decision making based on research findings is an improvement on that based on values or on principles. Raizen (1979) amplifies this in her analysis of the effects of the American National Institute of Education (NIE) on knowledge dissemination to school systems.

It was the assumption of the NIE that decisions in education would be better made in the presence of relevant research based information that in its absence. However, some observers have criticised this assumptions on at least four grounds. These are that:

(i) little important information derived from research exists which can be applied directly to improve schools,

(ii) social, economic and political forces are more powerful in influencing change than are the results of research. Thus even if relevant information is available, it may not be used,

(iii) in recent times schools have been subjected to a plethora of new knowledge in the form of innovations and now need time to consolidate, and

(iv) change based on new knowledge does not always lead to improvement.

In an effort to develop an increased awareness of the results of educational research findings amongst school personnel, the Australian Council for Educational Research (ACER) in conjunction with the New Zealand Council for Education Research (NZCER) has develop a novel package titled 'SET: Research Information for Teachers'. SET consists of articles written in journalistic style which are potentially more attractive to teachers than original research reports. ACER uses the mail to inform teachers about the package and to post the SET materials to subscribers.

Despite the many reservations which can be found in the literature regarding this form of dissemination (Fullan, 1979), the ACER/NZCER initiative represents a unique attempt in Australasia to make the results of educational research more accessible to schools. Even when a global view of such knowledge dissemination is considered, materials similar to SET are rare; they have been produced in Sweden (Council of Europe, 1971) and in the USA (Raizen, 1979).[2] However, their impact has not been evaluated in any systematic fashion. Hence the availability of SET enables a study of the impact of a new form of knowledge dissemination strategy to be assessed.

Foci for the Study

Given the nature of the SET package and the way in which it is distributed, it is apparent that the Research, Development and Diffusion (RD and D) paradigm is the most appropriate one on which to base a conceptualisation of SET's impact (Clark and Guba, 1965). In the RD and D paradigm, information flows from one community, the developers, to another, the practitioners. The nature of this process suggests at least four areas of study for those interested in change to existing systems (Dunn, 1980).

The first, is to focus on the processes used in educational research, to consider the ways research is carried out, and to determine whether there are links between the various methods of research and their effects on users. If processes were to be the focus, the investigator would probably examine the influence of factors such as: research design, analytical technique, sampling procedures, and forms of data collection.

A second area is to examine the impact of the products of educational research, to determine the differential effects of the form, content, language and length of research reports on their usage.

A third area of study is to focus on diffusion from the creators to users, and to determine what linkage factors influence the extent of the use of the new knowledge.

Finally, the potential user is a possible area for study. Here the focus is on factors which affect the adoption of new knowledge, and its internal diffusion. If the user is an extended entity, rather than an individual, it seems that the internal structure of the entity is an important factor to be considered (Blau, 1972). Also, there is some evidence emerging that the culture of the entity, the shared values and attitudes of the group, should also be considered in any study of the reaction of users to new knowledge (Louis and Rosenblum, 1978).

This paper is devoted to the fourth of these areas, a study of users, and is derived from a larger report in which the impact of SET is considered at a more global level (Owen and Hall, 1981). In this paper, we examine two aspects: (i) adoption, defined as the decision to subscribe to SET, and (ii) within school dissemination. Other important issues related to this area, particularly teacher utilisation of the SET materials, are the subject of an intensive study being undertaken this year.

Data Collection

During the latter part of 1980, an analysis of SET adopters was carried out using data supplied by the ACER.[3] The adoption rate suggested two things; (i) that the ACER publicity concerning SET had been effective, and (ii) that the adopters perceived SET to be potentially useful.

Subsequently, a series of thirteen short case studies were carried out, with the intention of identifying factors related to the adoption decision about SET and secondly to illuminate the dissemination of the SET materials in some educational institutions. The cases were not randomly selected. Rather, they were chosen because they represented clusters of adopters which, for one reason or another, seemed to be worthy of further investigation. The data were collected by recorded interview and observation, using a preconceived schedule as a guide for discussion. Tapes and notes were later analysed, and a draft of each case study returned to the respective respondents for confirmation.

Adoption Decisions

We found that the decision to adopt SET was generally made by an individual rather than by a group of staff in the school. The individual was either the Principal or Deputy Principal or the school Librarian. In the case of adoption by Principal or Deputy Principal, the decision was often made without reference to others in the school. Librarians sometimes responded to requests by a staff member. In some situations where the Librarian was a long-established staff member, he/she took the initiative in committing the school to a SET subscription.

We deliberately chose to study schools where multiple copies of SET had been ordered. We imagined that, in these schools, interest in SET may have arisen from a demand for educational research knowledge. However, in the few cases examined, this was not the case. For example, at School A, three copies of SET were ordered, addressed respectively to the Principal, the Librarian and, by name, to the Deputy Principal. Initially, no one subscriber knew of the other two adoption decisions.

At School B, nine subscriptions to SET were taken out. The Deputy Headmaster, to whom the copies were addressed by name, said that his idea was to "spread them around". He was a little surprised when we informed him of the extent of the school commitment. He thought that he had ordered about five or six copies and attributed the nine copies to an administrative error.

There were exceptions to the generalization that individuals made adoption decisions. At School C the Librarian had placed an order for SET as a result of staff response to the original SET brochure. This brochure was circulated to the school's Curriculum Committee, and through this Committee to other members of staff. A number of teachers expressed an interest in the SET package, and it was ordered subsequently.

Decisions about adoption followed from the publicity about SET distributed by the ACER. The given reason for adoption almost always stemmed from the brochure distributed by mail to the school. Such

information was addressed to the Principal, who was therefore in a position to deal with the information as he/she saw fit. As we have just indicated many Principals made independent decisions to subscribe. For example, the Principal at School A said it was "definitely worthwhile" to have research information available to teachers, while the Deputy Principal said "The administration felt a need to update educational information...were usually too tied-up in a day-to-day activities to keep in touch." There were also Principals who chose not to act on the information about SET.

We formed the impression that there were few schools where procedures were set up to assist in decision-making about the use of new educational knowledge (this is being examined more extensively in our present study). Some school Principals undoubtedly elect to retain control of decision-making on such matters.

It is tempting to put this down to the needs of Principals to retain a degree of power over "their" school's activities. However, an alternative explanation is that, in schools, appropriate mechanisms have not been created or the time found for making decisions about *educational* matters which involve members of staff. That is, more appropriate decision-making might require the restructuring of the ways in which schools operate from day-to-day to allow greater staff involvement in educational issues.

This perspective about decision-making and control can be derived from the comments of some Principals. This relates to their views of practising teachers being concerned less with matters "educational" as distinct from those directly related to their classroom teaching. One Deputy Headmaster said:

> "There is a problem, like other schools, in getting any discussion of education going... It is very hard to get the classroom teacher to spend much time thinking about theoretical issues."

The Principal of another school spoke of the major problem of her staff finding the time and energy to read research. Some decisions to adopt SET seemed to take place in settings where key personnel wanted

to extend the perspectives of classroom teachers:

> "... although they're very competent, they've been there for a long time and perhaps they'd be interested in widening their horizons a bit. They don't seem to actively seek out new information, new ideas. There's no discussion in the staff room about issues, it's just chit-chat."

Within School Dissemination

We made an attempt to understand the communication of information and the factors which hinder or assist the flow of knowledge in schools. We found situations where what might be termed "passive" dissemination existed and others where a more active or structured procedure operated. There were also clear examples of "barriers" to dissemination. Some examples of these situations are outlined below.

Forms of Dissemination:

At School B, where nine copies of SET were ordered, the Deputy Headmaster explained

> "I keep one, which I currently can't find which means I've lent it to somebody. I give the Headmaster one, the curriculum coordinator one, the (religious) community get one, and I put about five in the Staff Room."

He had distributed SET without comment, "not because I wasn't in favour of promoting it, but because I didn't get around to it." The Staff Room copies were placed on a table at first, then after a while on a magazine rack. The rack, on the day of our visit, held many titles, including "Time", "New Scientist", "The Listener", and "The Educational Magazine".

A less passive procedure was carried out by the Principal of School A in distributing SET and other written materials. He considered that it was the role of subject coordinators to disseminate information amongst the teaching staff:

> "When it first comes in, when you open up a thing, you think 'Well, that's particular information for Peter,' so you send it across to Peter. Obviously, if Peter sees something there it would be his role to let the staff know there's something they could look at."

The Librarian at that school took the copy addressed to her and placed it on display stand in the Staff Room, along with other periodicals and brochures. She wrote the titles of the articles in block letters on a sheet and taped this on to the front of the printed cover. This was designed as a more prominent display to catch teachers' attention. In addition, the Librarian placed a notice about SET on the Staff Room notice board.

The most structured form of dissemination we encountered occurred at School C. As mentioned before, the Librarian and Curriculum Committee used a circulation procedure to determine the degree of staff interest in subscribing to SET. It became part of the professional library and was circulated to a group of about 12 interested staff. The Librarian believed that they had shown it to others in the Staff Room, and the names of those who were keen to see the next issue were added to the original circulation list. This list was further extended by the Librarian when she had seen the contents of the first SET issue for 1980. The Librarian listed the article headings for that issue in one of the school's daily staff bulletins. As a result, a few additional names were added to the circulation list. For the next issue, she was planning to run the full contents page in the bulletin each day for a week, as some staff miss the bulletin on certain days.

Barriers to Effective Dissemination:

Three types of barriers to internal dissemination can be extracted from the case studies. The first was the failure of the nominal adopter to pass the SET materials on to other staff members. In some cases, this occurred because senior staff took the view that they had "first rights" to the package. In these cases, further distribution did not occur. Other distribution holdups resulted from administrative hitches, such as the case where the Librarian was unable to decide on a suitable classification for SET. For some weeks, SET remained in her "in tray".

A second and associated barrier occurred where staff failed to pass SET on to the next person on a circulation list.

A third barrier was identified in schools in which new knowledge dissemination was given low priority, due to workloads or some major organizational changes. For example, staff at School D had only recently moved into the second stage of their open-design building. The first issue of SET for 1980 was on the Principal's desk in a small file of papers and folders. Although the issue had arrived some time ago, moving into the new building had caused some disruption to the total program, and the Principal had not had the opportunity to bring SET to the attention of the staff.

Conclusion

As indicated earlier, any conclusions based on the study to this time must be put tentatively, due to the small number of cases examined, and because of the relatively small time space over which the study was conducted.

In the cases studied, most adoption decisions about SET were made by an individual, usually on the basis of previous information from the ACER. In cases where the Principal retained control over the SET materials two major approaches were evident. In the first, SET was retained by staff at the top of the school hierarchy, and thus within-school distribution did not proceed. In the second, there were "passive" attempts to bring the SET materials to the notice of school staff.

There were a few notable instances where an "active" dissemination procedure was invoked. In the majority of these cases, the disseminator was the Librarian, but we encountered situations where staff with other responsibilities or backgrounds took on this role.

The emergence of a disseminator, often self styled, seems to be a similar development to that found by Patton (1978) in his American study of the impact of evaluations. He reported the influence of a 'significant individual' who became personally responsible for ensuring that the results of commissioned evaluations were used in the organisations affected. In this study the significant individual took the SET package and other research knowledge and used it to influence the thinking and practice of his colleagues.

The active disseminator was characterised by two features. First, he/she was a long-term member of staff, and had built-up knowledge of the educational interests and attitudes of other staff. Secondly, the disseminator was able to bring SET articles to the notice of staff members at the appropriate time, when such information was needed. In summary, the active disseminator was committed to the spread of new knowledge, had awareness of staff needs, and had the opportunity to pass on relevant information.

In these schools, internal dissemination was a significant cultural characteristics of the organization. Serious consideration should be given to encouraging these dissemination roles in schools, if knowledge usage is to be maximised.

Notes

1. The journal is *Knowledge: Creation, Diffusion and Utilization.* Los Angeles: Sage Publications.

2. These packages were published in Sweden under the title: PM fran Skoloverstyrelesen (Memorandum from the National Board of Education). In the USA, they included the US Office of Education's PREP series (Putting Research into Educational Practice), specialised brochures on the cognitive and social development of teaching, and articles written without use of technical jargon on other educational issues.

3. In July 1980, there were 2950 adopters of SET in Australia. These included 469 "private" subscribers, 866 secondary schools, 1326 primary schools, 68 tertiary institutions and 215 "systems level" adopters. Overall, we estimate that 23% of all Australian schools adopted SET in 1980.

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